

ATHLETIC JOURNAL

Vol. 3, No. 10

JUNE, 1923

20c the Copy



C. R. Brookins

C. R. Brookins, University of Iowa, established a world's record of 23 1-5 seconds in the 220 yard hurdles, June 2nd, in the Intercollegiate Conference Athletic Association Games held on the University of Michigan track.

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THE ATHLETIC JOURNAL

A PROFESSIONAL MAGAZINE FOR THE
COACHES OF THE COUNTRY

JOHN L. GRIFFITH, EDITOR

VOLUME III

JUNE, 1923

NUMBER 10

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Entered as second-class matter April 5, 1922, at the Postoffice at Champaign, Illinois, under the
Act of March 3, 1879

Office of Publication, 114-116 N. Walnut St., Champaign, Ill.

Editorial and Business Office, 7017 Greenview Ave., Chicago, Ill.

Subscription \$1.00 per Year

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The ATHLETIC JOURNAL

VOL. III

CHAMPAIGN, ILLINOIS

No. 10

THE RUNNING BROAD JUMP

BY

STEVE FARRELL

Track Coach, University of Michigan

Steve Farrell has developed two remarkable broad jumpers—Carl Johnson and DeHart Hubbard—at Michigan, and in response to a request has contributed the following article illustrated by action pictures of these two champion jumpers.—EDITOR'S NOTE.



THE best broad jumpers are men who are fast sprinters and especially are men who can acquire a great deal of speed in the run to the take-off board. It is true that there have been some men who could jump twenty-three feet and more who could not run one hundred yards in eleven seconds, but the best two jumpers I have coached have both been able to run the hundred in ten seconds. Johnson, in fact, has a record of nine and four-fifths seconds for the century and won the fifty-yard dash three years in the Western Conference Indoor Meets.

Pat O'Connor for twenty years held the world's record at twenty-four feet eleven and three-fourths inches. This record was broken by Ted Gourdin of Harvard in the Yale-Harvard, Oxford-Cambridge Meet in 1921. Last year Hubbard defeated Gourdin in the A. A. U. Championships at Newark, New Jersey, with a leap of twenty-four feet five and one-eighth inches and this winter jumped twenty-five feet four and one-half inches in the Illinois Indoor Games. In making this jump the toe of his shoe touched the ground in front of the take-off board and so, of course, the record was not counted.

Michigan men are hoping that some time this spring Hubbard will establish a new world's record, but whether he does or not he is the best natural jumper in America and possibly can jump as far as any man now in the game.

In the run to the take-off board Johnson uses two take-off marks while Hubbard uses but one. I would suggest that young jumpers use two check marks, but since Hubbard can get his take-off with one mark it would be foolish for him to bother looking for another. The diagram on page 4 illustrates Johnson's run to the jumping board.

He started with his right foot, took four steps and this brought his left foot on the first check mark. From here he took six running strides covering about thirty-six feet of the runway. This caused him to step with his left foot on the second check mark. Six more running strides brought him with his left foot on the take-off board. Since he had accumulated speed he covered approximately two feet more in his last six strides than in the preceding six steps. In this connection the last step of the run should be shortened just a little to enable the jumper to get plenty of height in his jump. If a jumper has to reach for the board he will never get much distance.

As already suggested, Hubbard

uses but one check mark. He starts about seventy-five feet from the board and gathers speed remarkably fast. In fact, a great deal of his success depends upon the fact that he can attain maximum speed in a very short time.

helping him to get a good rise from the ground.

Illustration 2 was taken just as Hubbard is executing the kick and a fraction of a second before he reaches the greatest height in the air. This man does not get as high

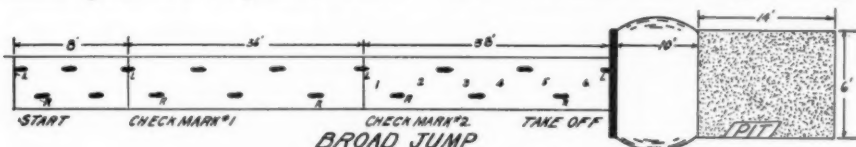


Illustration 1

Hubbard did not use what is termed the kick when in the air in the jump until he came to Michigan, but now he uses one kick which is very fast. Illustration 1 shows Hubbard as he leaves the take-off board. Note how much his jump resembles a running stride and how he uses his arms in

as some jumpers, but his speed carries him forward. Height in broad-jumping, however, is desirable and most jumpers will do well to strive to get as high as possible. It is not advisable to place hurdles or other obstacles in the landing pit for the athlete to clear as these bother most men. Sometimes results may be obtained by stretching a piece of wool yarn across the pit for the jumper to clear. If he has difficulty in seeing the yarn a piece of paper or cloth may be thrown over the string.

Illustration 3 shows Carl Johnson making a jump of twenty-four feet and one inch. Johnson used



Illustration 2

the double kick. Note that his form in the air is different from the form now used by Hubbard.

Illustration 4 pictures Hubbard at the height of his jump. He

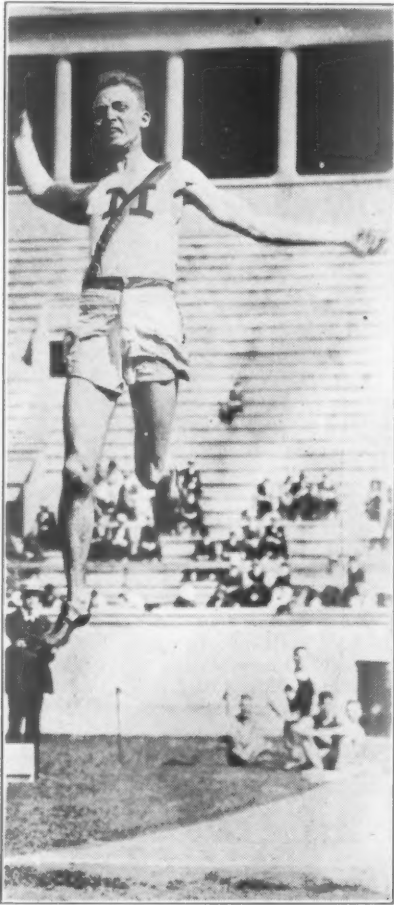


Illustration 3

uses a throw of the body at the finish, which helps him in the last few feet. His arms are raised preliminary to landing.

Illustration 5 indicates the position assumed in landing. Hubbard throws his arms backward when he lands in the same manner as a man who uses weights in the standing broad-jump.

In training for the broad jump a man should not jump for distance more than twice a week. He should take pistol practice with the



Illustration 4



Illustration 5

sprinters and should have some work on the low hurdles.

Johnson wore jumping shoes with spikes in the heels and Hubbard jumps with running shoes. If a shoe without a heel is worn, sponge rubber or something soft should be placed in the heel of the shoe as a guard against stone bruise.

STARS OF THE TRACK SEASON



Charles R. Brookins of the University of Iowa, who holds the world's record at 23 1-5 seconds in the 220 yard hurdles on a straightaway and the world's record of 24 1-5 seconds in the same event around a turn.



A. B. Helffrich, Pennsylvania State University. Record in the 880 yard run in the National Meet, 1922, 158 1-10 seconds. Record in the Intercollegiate Meet, 1923, 155 4-5 seconds.



Paul Sweet of the University of Illinois winning the 440 yard run in 48 1-5 seconds in the 1923 Intercollegiate Conference Athletic Association Meet.



L. G. Whitman of the University of Michigan winning the 100 yard dash in 9 4-5 seconds in the 1923 Intercollegiate Conference Athletic Association Meet.



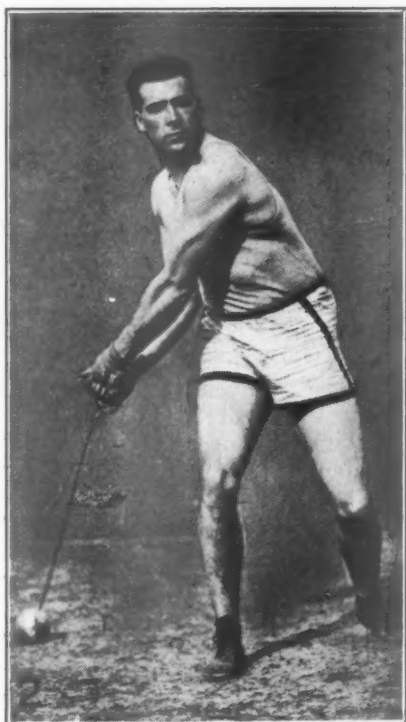
W. Poor of the University of Kansas winning the high jump at 6 feet 4 inches in the Drake Relays. He also won the high jump in the Missouri Valley Conference Meet.



R. W. Smith of the University of Michigan winning the high jump at 6 ft. 2 in. in the Intercollegiate Conference Athletic Association Meet, Ann Arbor, Michigan.



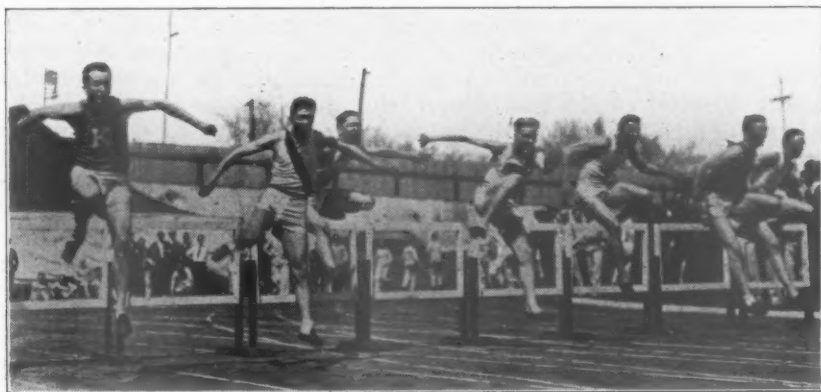
E. C. Wilson of the University of Iowa winning the 220 yard dash in 21 1-5 seconds in the 1923 Intercollegiate Conference Athletic Association Meet.



F. D. Tootle of Bowdoin College winning the hammer throw in the Eastern Intercollegiates with a throw of 181 feet 6½ inches which is a world's record for American College men.



James Reese, Texas University, winning the half mile run in 1 minute 56 4-5 seconds in the Rice-Texas Dual Meet.



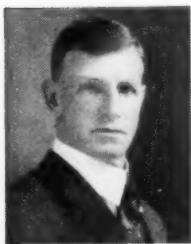
J. Towler of the University of Minnesota winning the 120 yard hurdles at the Drake Relays in 15 1-5 seconds.

AN ANALYSIS OF PADDOCK'S SPRINTING ABILITY

BY

CAPTAIN HARRY W. MALONEY.

Captain Maloney is Coach of Rugby and Soccer Football at Stanford University. He was formerly Track and Field Coach at Stanford University. He was Coach and Trainer of the American Track and Field Team in the Inter-Allied Games; was Trainer and Rugby Commissioner of the American Olympic Team in the Olympic Games in 1920; was Captain U. S. Cavalry 1917, and Division Athletic Director of the 8th Division in 1918.—
EDITOR'S NOTE.



AT the time Charlie Paddock, of the University of Southern California, tied the world's record in the hundred (9 3-5), and made during the same meet the remarkable time of 20 4-5 in the two-twenty, both taking place on the Stanford Track, many were heard to remark after the race: "How does a man manage to run so fast who has anything but good form according to the orthodox method of sprinting?" The question arises in the minds of those who have watched the career of this marvelous sprinter, "What about Paddock's form? Is his form, when properly analyzed, found to be what many say it is—bad?"

It was the writer's good fortune as Coach and Trainer of the American Track Team during the Inter-Allied games in Paris, to have had Charlie Paddock under his wing, at which time this blond-haired youth from the southern part of the state demonstrated his sprinting ability. The same question then as now was asked: "How can a man make such speed without good form?"

In the first place, Paddock is what is known in track athletics as long-limbed, meaning that for his build he has long leg muscles and a comparatively short waist, with a rather deep chest.

In normal action no muscle ever

contracts alone! They act in groups, the time and force of each being so controlled as to assist the others in the accomplishment of some purpose; muscular movements so controlled are called co-ordinated movements, and the muscles associated together in a co-ordinated movement may assist one another in any of the following ways:

1. To increase the power of movement
2. To increase the range of movement
3. To guide the direction of movement
4. To moderate the speed of movement, and to stop it at a certain point. Here is where Paddock gets his power to propel his body forward,—perfect co-ordinated action of the muscles.

Let us review the Hundred as it occurred, and place Paddock on his mark, or get him ready to start off on his record breaking journey. We notice that he spends considerable time in digging his holes, being very careful to have them in the right position, not too wide or too far apart, and above all not too shallow in depth to assure a sound footing and a good drive for his first stride. All these minor details mean much when a record is at stake. At the moment of "Set", his body is well-balanced, with his weight resting principally on his forward leg; his trunk and head are in a straight line, his legs quite bent, his arms straight; we notice a little peculiarity about the

position of his hands,—his fingers spread and in front, his thumbs to the rear. But why the fingers to the front? The reason is that when one is set and waiting for the gun, one can lean well forward and still retain one's balance and besides one can bear down on the track with the fingers. One can with the pistol force the cinders behind one, so to speak, assisting one greatly in getting away quickly.

After Paddock leaves his holes we notice that he is not in a hurry about straightening up, but when he does, he is in full stride with an almost perfect muscle action. We also notice that he is swinging his arms forward and not obliquely across the body; that in the backward swing the arms stop almost at the thighs; and that he has not

out, he reminds one of a hurdler trying to reach the track quickly, as he comes down from the high hurdles. In the race shown in the illustration our University champion and track captain, Morris Kirksey, is in the lead for the first fifty yards; at eighty yards they are abreast, when with a flying leap Paddock hurls himself at the tape with a kind of side movement, brought about by the evenness of his seven-foot stride, which never seems to vary in rhythm. The calmness of Paddock's features at the finish of a race denotes that he has mastered the art of correct breathing during a race, which assists materially in keeping his body under control and preventing his muscles from tying up, for we well know that during great mus-



This picture shows Paddock and Kirksey in a close finish. Note Paddock's burst of speed at the finish.

changed the position of the hands, that is, the back of the hands are still to the front. The perfect co-ordination of the muscles at the hips is very noticeable,—this gives a swing to his stride. There is very little lost motion with his legs between strides; he reaches well out with each stride, extends his legs as the knee is raised, and reaching

cular effort one is apt to hold his breath; whenever one tries to compel any set of muscles to contract with their utmost strength, one is never able to direct all one's nerve force into the muscles most needed at the time, and there is a scattering of nerve impulse into muscles not involved in the movement and even into those that prevent it.

(Continued on page 29)

THE CRAWL STROKE

BY

E. J. MANLEY.

Mr. Manley is now Director of Intramural Athletics and Coach of Swimming at the University of Illinois. He was formerly a member of the famous Missouri Athletic Club Swimming Team, St. Louis, Missouri. At Illinois he has developed several champions and has developed one of the best intramural systems in American colleges.—EDITOR'S NOTE.



SINCE the adoption of the crawl stroke for speed swimming many ways have developed in which to adapt this stroke to various individuals. The stroke originated in Australia. The original movements were as follows: the right arm was brought down as the left leg was raised and vice-versa. There are very few using the original stroke today. Most swimmers work legs and arms independently. Each arm and leg movement, however, must be timed properly in order to get the proper co-ordination and rhythm. The point of the crawl is to lessen the body resistance to the water, to keep it in constant motion and at the same time to keep the body near the surface of the water. There are different ways of swimming the crawl, the following being the most common: the six beat leg crawl, the four beat, the single

trudgeon crawl and the double trudgeon crawl. Every one of these different styles has been used with great success. It is up to the individual to try to perfect the style which works best for him. A beginner may learn the general principles of the crawl stroke movements and with practice and coaching he will gradually fall into the style best suited for him.

LAND DRILL.

This drill may be used in class formation as follows: Stand erect, place hands on hips, turn trunk left and right alternately. This exercise is used in order to get a slight roll, which is necessary in using the arm movements. Next repeat with breathing exercises. In turning raise the shoulders. In the breathing exercise raise the head upward and slightly sideward to the left with the mouth open, (inhale through the mouth and exhale through the nose) and turn head back to the original position as the air oozes out. Next bend the trunk forward, hands on hips as starting position. On the count of

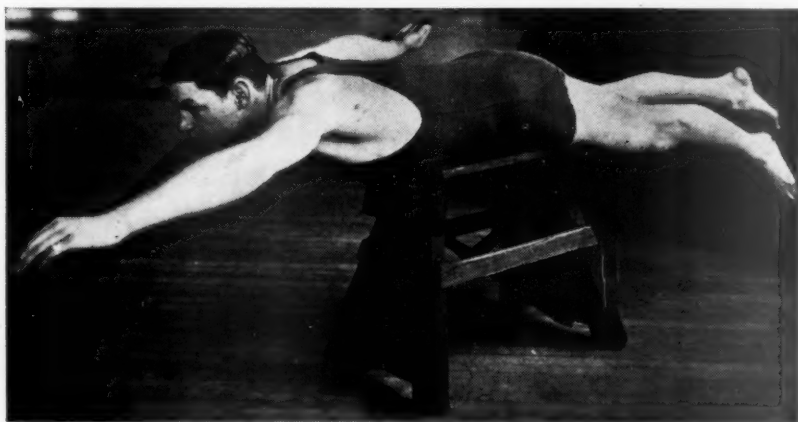


Illustration 1. Johnnie Weismueller illustrating the crawl stroke.

1, raise the elbow sideward and upward, keeping arm bent at the elbow and hand cupped. On the count of 2, swing hand to hips

slightly bent to inside line of body. At count of 2 raise right arm sideward and upward and thrust it forward. Simultaneously at the count



Illustration 2. The right arm being thrust forward for the next stroke.

again. Alternate left and right. On 4 bend trunk forward and add breathing exercise. On 5 bend trunk forward, hands on knees as

of 2 the left arm is brought down in the same manner as the right. At the count of 1 again the right arm is brought down and the left



Illustration 3. Ed Manley demonstrating the method of inhaling in the crawl stroke.

starting position. Raise arms forward—start the complete arm circle or movements. At the count of 1 bring right arm down with elbow

arm is lifted and thrust forward. This makes the complete arm movement. Keep repeating many

(Continued on page 32)

The ATHLETIC JOURNAL

Published by
THE ATHLETIC JOURNAL PUBLISHING CO.

JOHN L. GRIFFITH, Editor

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WHAT THE JOURNAL STANDS FOR

The Athletic Journal as the names indicates is a magazine devoted primarily to the field of athletics. It is published monthly and is read by the majority of the fifteen thousand school and college coaches. It is interested primarily in school and college amateur sports. It believes that corrective gymnastics and formal exercises such as setting-up drills are necessary and very much worthwhile, but it also believes that the American idea of competitive games is better than the German idea of formal gymnastics; both should be included in a physical education curriculum.

The purpose of our competitive games is social, moral and physical in scope. They develop such social qualities as cooperation, loyalty, unselfishness, modesty, the spirit of democracy and the desire to play the game according to the rules. They emphasize the value of clean living, stick-to-it-iveness, a fighting spirit and the necessity of doing one's best under all conditions. They stress the importance of good health and strong bodies and make national heroes of such men as Ray Schalk, Charlie Paddock and Gordon Locke rather than Jessie James and Cole Younger.

Physical education is a general term that includes all of the various activities such as inter-school and inter-collegiate athletics, intramural athletics, calisthenics, apparatus work, corrective gymnastics and swimming. An academic program composed exclusively of corrective exercises would be as inadequate as one which made provision for the teaching of nothing else but the Semitic languages. Some restrictions should be imposed and usually are imposed on the pupils in the schools and colleges as to the number of hours for which they may enroll. Likewise there should be restrictions which will place a limit on the number of games which may be played in a given sport and on the length of the playing season. The Journal believes that the principle of good sportsmanship applies to schools as well as to individuals. It is just as unfair for a school to seek an advantage through rule violation as it is for a sprinter to steal a start. The Journal further believes that honesty and fair dealing are no more inherent in men who teach Chemistry or English than in men who coach athletic teams and holds that if an athletic director can not be trusted to represent his department that the governing board is at fault in keeping such a man on the pay roll.

The physical education activities have a place in the pedagogical plan. These activities are not purely academic if academic means intellectualism. If the sole function of the school or college is to develop the intellectual powers of the pupils, then our educators mistake in teaching the school children the Pledge of Allegiance to the American Flag, in providing for military training, for inculcating in the lives of the pupils an appreciation for art or music, or for making possible religious instruction through the Y. M. C. A. or church foundations.

The Journal holds that the greatest service that our school teachers and college professors can render is by training men and women for citizenship and that the coach has a wonderful opportunity to develop up-standing men of force and character. This does not mean that it is wrong for a teacher to insist that the class room work be well done or for a coach to demand that his athletes play the game as well as it is possible for them to play it.

AMERICAN COACHES

Athletic coaching as a profession was little dreamed of a quarter of a century ago. At that time the few college men who contracted to coach a school or college team did so for the love of the sport or as temporary employment. Today several thousand young men are in physical education work and further they have chosen this vocation for life. The medical, law and other professions date back two thousand years or more; the athletic coaching profession is in its infancy.

As the doctors and lawyers have written their codes of ethics and have developed professional standards and along with them a professional spirit so the coaches in our schools and colleges are working out their codes and are developing a professional spirit and understanding. The organization of the Track Coaches of America and the Association of Football Coaches, while limited in scope, are movements which will help to dignify the coaching profession. Further, the athletic men meet frequently in summer schools and at conventions where they become acquainted and learn to appreciate each other's good qualities.

The Journal presents in this issue the names and biographies of nearly one hundred coaches who have contributed articles for this magazine. These men have made their contributions gratuitously, believing that a professional magazine for coaches is worth while. Their ideas and opinions thus expressed are of incalculable value in improving the technique in the coaching of our sports and in elevating the standards. Further, without doubt, the Journal is helping to make the coaches acquainted with each other. If this is done some additional progress has been made in furthering the esprit de corps among the coaches of the nation.



Dr. F. C. Allen

DR. F. C. ALLEN

Director of Physical Education, University of Kansas. Graduate of Kansas where he played football, basketball and baseball. Coached at Missouri State Normal College, Warrensburg, Missouri, for seven years. In 1923 coached the team that won the basketball championship of the Missouri Valley Conference.



L. B. Allison

L. B. ALLISON

Director of Physical Education, University of South Dakota. Graduated from Carleton College, where he played football, basketball and baseball; was Captain of the 88th Division Football Team in 1918; Head Coach of football and baseball University of Washington.



Chas. W. Bachman

CHARLES W. BACHMAN

Football and Track Coach, Kansas State Agricultural College. Graduated from the University of Notre Dame; was All-Western Guard in 1916; played on Great Lakes team in 1918; coached at DePauw University 1917; Head Coach of football and track Northwestern University in 1919.



A. M. Barron

A. M. BARRON,

Director of Physical Education, Michigan Agricultural College. Graduated from Pennsylvania State College, where he was a member of the football and track teams; in 1918 he coached the Camp Upton football team and at Michigan Agricultural College coached the football and track teams.



J. M. Barry

J. M. BARRY

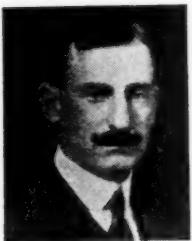
Head Coach of Basketball and Baseball, University of Iowa. Graduate of the University of Wisconsin; Director of Physical Education Knox College 1917-1922. His team won the conference championship in basketball at Iowa in 1923.



Branch Boccock

BRANCH BOCOCK

Director of Athletics, Louisiana State University. Graduate from Georgetown University, where he was a member of the football team and the crew; Head Coach University of Georgia; Head Coach V. P. I. and Head Coach University of North Carolina.



Elmer Berry

ELMER BERRY

Associate Director, International Young Men's Christian Association College. Graduate from University of Nebraska. Captain Nebraska Baseball team 1900-1901; played end Y. M. C. A. College 1901-1902; at present Head Coach Baseball and Football Y. M. C. A. College. Author of several books.



James G. Bliss

JAMES G. BLISS

Director of Physical Education and Baseball Coach, Miami University. Graduated from Ohio State University, where he played baseball and basketball. Served as Captain of Infantry in France; Director of Athletics Central High School, Akron, Ohio.



George V. Blake

GEORGE V. BLAKE

Boxing Instructor, Los Angeles Athletic Club. Coached the army boxers for the Olympic games in Antwerp; served as boxing instructor in the army camps during the war, and was chosen as special instructor by the General Staff for the Infantry School of Arms.

CAPTAIN JOHN R. BENDER

Physical Director, Knoxville, Tennessee Schools and Playgrounds. Degrees: A.B., Nebraska; M.A., Washington State College; L.L.B., St. Louis; L.L.M., Tennessee. Coached South Dakota Normal, Washington State College, Kansas Agricultural College, Haskell Indians, St. Louis University and the University of Tennessee.



Capt. J. R. Bender



Geo. T. Bresnahan

GEORGE T. BRESNAHAN

Assistant Director and Track Coach, University of Iowa. Graduate from the University of Wisconsin, where he was on the track teams 1912-13-14. Head cross-country coach and assistant track coach University of Wisconsin for several years.

CHESTER L. BREWER

Professor of Physical Education, University of California. Graduated from University of Wisconsin, where he won letters in football, baseball and track. Director of Athletics Albion College, 1899-'02; Director of Athletics University of Missouri, 1910-1917; Director of Athletics Michigan Agricultural College, 1919-1922.



Chester L. Brewer



W. Sterry Brown

W. STERRY BROWN

Swimming Coach, University of Michigan. Was pupil of and assistant to George H. Corson of the University of Toronto; assistant in swimming, University of Illinois, and Swimming Coach Washington University.

IRA T. CARRITHERS

Director of Athletics and Coach of Basketball and Baseball, Coe College. Graduated from the University of Illinois, where he won his letter in football, baseball and track; was Director of Athletics at Alma College, 1908-1909; Director of Athletics, Knox College, 1910-1912; Freshman Coach, University of Illinois.



Ira T. Carrithers

GEORGE CLARK

Head Football and Baseball Coach, University of Kansas. Graduated from the University of Illinois, where he played on two conference championship football teams and two championship baseball teams. Played on the army team that won the championship of the A. E. F.



George Clark

HARVEY W. COHN

Track Coach, New Hampshire State College. Was a member of three Olympic teams; he won the Military-Metropolitan, Canadian and National championships from the half-mile to the six-mile cross-country run.



Harvey W. Cohn



F. B. Corboy

F. B. CORBOY

Director of Athletics, Elon College, North Carolina. Graduated from the University of Pittsburgh, where he played football; coached the P. R. R. apprentice team at Altoona; coached the 109th Infantry team in France, and the 11th Ambulance Company at Camp Hancock.



W. H. Cowell

W. H. COWELL

Director of Physical Education, New Hampshire State College. Graduated from the University of Pittsburgh, where he played football; also played at Illinois and Kansas; served as an officer in the army during the war.



Paul J. Davis

PAUL J. DAVIS

Director of Physical Education, North Dakota University. Graduate of Dickenson College, where he played football. Coached football at Dickenson; football, baseball and basketball, Oklahoma A. & M.; Director of Athletics, North Dakota Aggies; Camp Athletic Director, Camp Taylor, 1918-19.



Major C. D. Daly

MAJOR C. D. DALY

Recently Retired as Head Coach of the Army Football Team. Graduated from Harvard, where for two years he was all-American Quarterback and later in 1901, when a cadet at West Point, assisted Haughton, 1908-09-12; coached at West Point, 1913-16; and again 1919-23.



F. E. Dennie

F. E. DENNIE

Director of Physical Education, Rolla School of Mines. Graduated from Brown University; was all-American selection in football in 1908 and in baseball in 1909; won letters in football, baseball and track; Director of Athletics, St. Louis University; Assistant Coach, 89th Division football team.



M. L. Eby

M. L. EBY

Head Coach of Football, Coe College. Graduated from the University of Iowa, where he played on a team that won the conference championship; was line coach at Iowa, 1909-13; at Coe his teams have won 44 out of 59 games played.



A. A. Eustis

A. A. EUSTIS

Director of Athletics, Washington State Normal School, Cheney, Washington. In 1921 and 1922 his teams won the minor college championship of the state. In 1922 he won eighteen out of the twenty-two games played. He formerly coached Pullman High School.



Dana M. Evans

DANA M. EVANS

Director of Physical Education, Northwestern University. Played football and baseball at Boston University; Director of Athletics, Denver Athletic Club; Director of Athletics, Beloit College; Basketball and Track Coach, University of Indiana.



Stephen J. Farrell

STEPHEN J. FARRELL

Track Coach, University of Michigan. Winner for two years of the Sheffield and Manchester handicaps; holds records of 10 sec. in 100-yard dash, 48 sec. in the 440, 1:58 in the 880. Has coached at Maine, Yale, Ohio State and Michigan.

ROBERT FLETCHER

Director of Athletics, Findlay, Ohio. Graduated from the University of Illinois, where for three years he played quarterback on the football teams. For two years he has coached the Findlay football, basketball and baseball teams.



Robert Fletcher



Ray L. Fisher

RAY L. FISHER

Baseball Coach, University of Michigan. Graduated from Middlebury College, where he was an all around athlete and varsity pitcher. From 1909 until he entered the service in 1918, he pitched for the New York Americans. After his discharge, he pitched for the Cincinnati Reds. Won Conference Baseball championship in 1923.

FRANK FOGARTY

Ground-keeper of Running Tracks and Tennis Courts, University of Illinois. Mr. Fogarty has the reputation of always having the indoor track in the armory in splendid condition for the Illinois Indoor Relays. His outdoor cinder track is also one of the fastest in the country.



Frank Fogarty



Ralph Glaze

RALPH GLAZE

Director of Athletics, Lake Forest University. Graduated from Dartmouth, where he played football, basketball and baseball. Chosen on all-Dartmouth team in football and All-American. Pitched for Boston National League. Coached Southern California, Drake and Greeley, Colorado.

HARRY GILL

Track Coach, University of Illinois. Winner of both amateur and professional All-Around Championship of America; has coached at the University of Iowa, Beloit College and the University of Illinois. At Illinois he has won 85 per cent of his conference dual meets.



Harry Gill

R. E. HABERMAN

Professor of Physical Education and Baseball Coach, Knox College. Graduated from Springfield College; served in the Navy during the war; Director of Athletics and Football Coach New York Military Academy; Director of Athletics and Coach of Football, Basketball Carroll College.



R. E. Haberman

GEORGE H. HUFF

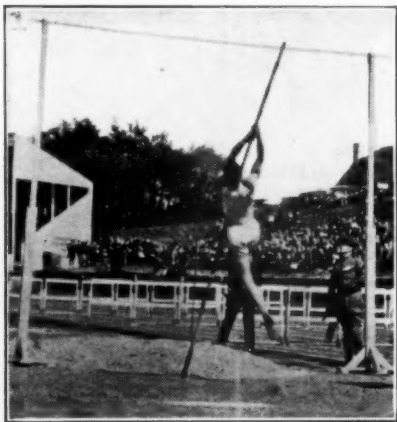
Director of Physical Training, University of Illinois. Graduated from the University of Illinois, where he won letters in baseball, football and track. Attended Dartmouth College, where he played football and baseball. Coached Illinois teams for twenty-four years.



George H. Huff

**PAUL PREHN**

Wrestling Coach, University of Illinois. Winner of the middleweight wrestling championship of the armies of the world in the Inter-Allied Meet in the Pershing Stadium in Paris in 1919.

**Eldon I. Jenne in action****AUBREY DEVINE**

Assistant Football Coach, University of Iowa. Graduated from the University of Iowa where he won his letter in football, basketball and track. In 1921 Iowa won the Western Conference Championship and Devine was chosen as All-American quarterback.

**JOHN P. NICHOLSON**

Director of Athletics, University of the South, Sewanee, Tennessee. Graduated from University of Missouri, where he was a brilliant performer in track and field competition. Ran the hurdles on the American team in the Olympic Games at Stockholm.

**O. H. VOGEL**

Athletic Coaching School, University of Illinois. Graduated from the University of Illinois, where he won his letter in baseball, basketball and football. In 1922 he was chosen for the All-American College Baseball Team.

**RAY SMITH**

Boxing Instructor, Fort Worth, Texas. Lieutenant of Infantry in U. S. Army; Boxing Instructor Physical and Bayonet School, Camp Pike, Arkansas; Boxing Instructor Fort Worth, Texas.

JOHN S. PRESCOTT

Director of Athletics, Fort Lauderdale, Florida. Graduated from the University of Illinois, where he was a member of the track teams for three years. His events were the dashes, relays and low hurdles.

**John S. Prescott****Aubrey Davin: Forward Passing**

**H. J. Huff****H. J. HUFF**

Director of Athletics, Grinnell College. Graduated from Grinnell College, where he won the 100-yard dash in the State Meet, Central A. A. U., National A. A. U. and Special Invitation in 1907, and the 220-yard dash in state meets 1905, '07, '08, the conference 1907 and '08, and the National A. A. U. in 1907.

ELDON I. JENNE

Assistant Coach, Washington State College, Pullman, Washington. Member of Olympic team in 1920; member of the all-American College track team in 1921 and holds the Pacific Northwest Conference record in the vault at 13 feet 1 inch.

**Eldon I. Jenne****Ralph Jones****RALPH JONES**

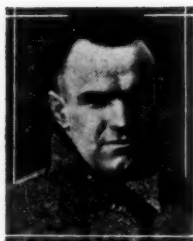
Director of Athletics, Lake Forest Academy. Coached at Wabash College, Purdue University, and the University of Illinois. For three years has coached the football, basketball and baseball teams at Lake Forest Academy with marked success.

T. E. JONES

Director of Athletics, University of Wisconsin. Graduated from Iowa State Teachers' College and Springfield College. Coached Madison High School, Madison, Wisconsin; coached track at the University of Missouri and coached track at the University of Wisconsin.

**T. E. Jones****RALPH G. LEONARD**

Athletic Coach, Polytechnic Preparatory Country Day School, Dyker Heights, Brooklyn, New York. Graduated from Springfield College; served as First Lieutenant in the U. S. Army; now coaches the wrestling, soccer-football and lacrosse teams at the Polytechnic Preparatory Country Day School.

**Ralph G. Leonard****SAMUEL A. LEVY**

Athletic Coaching School, University of Illinois. Graduated from the College of Education, University of Illinois, where he majored in athletic coaching. Won the scholarship prize offered men in the coaching school for two years.

**Samuel A. Levy****FRED W. LUEHRING**

Director of Physical Education, University of Minnesota. Graduated from Northwestern College and received master's degree from University of Chicago. Competed in football, basketball, track and water polo; Director of Athletics Ripon College; Associate Director and Basketball Coach, Princeton; Director of Athletics, Nebraska.

**Fred W. Luehring****CARL L. LUNDGREN**

Baseball Coach, University of Illinois. Graduated from the University of Illinois, where he played baseball and football; pitched for Chicago Cubs seven years; coached Princeton and Michigan baseball teams. Has won Conference championship last five years.

**Carl L. Lundgren**

CAPTAIN HARRY W. MALONEY

**Captain Harry W.
Maloney**

Coach Rugby and Soccer Football, Boxing, Fencing and Track, Stanford University. Coach and Trainer American Track and Field Team Inter-Allied Games; Trainer and Rugby Commissioner American Olympic team, Olympic games, 1920; Captain U. S. Cavalry, 1917, Division Athletic Director 8th Division, 1918.

E. J. MANLEY

Director of Intramural Athletics and Coach of Swimming, University of Illinois. Member of famous Missouri Athletic Club Swimming team, St. Louis, Missouri. At Illinois he has developed several champions and has developed one of the best intramural systems in American colleges.



E. J. Manley

E. J. MATHER

Basketball Coach, University of Michigan. Graduated from Lake Forest University, where for four years he was a member of the football, baseball and basketball teams; coached Kalamazoo College; at Michigan his basketball team in three years tied for first, was runner-up and tied for second.



E. J. Mather

CHARLES W. MAYSER

Director of Physical Education, Iowa State College, Ames, Iowa. Athletic Director and Football Coach at Williston, Newark Academy, Tome, Franklin and Marshall, and Ames. At Ames he has also coached wrestling and is a member of the N. C. A. A. Wrestling Rules Committee.



Charles W. Mayser

JOHN F. MAULBETSCH

Football Coach, Oklahoma A. & M. College, Stillwater, Oklahoma. Graduated from the University of Michigan, was all-American halfback, 1914-16. Coached Phillips University, 1917-19-20, and Naval Aviation, 1919.



John F. Maulbetsch

DR. W. E. MEANWELL

Medical Supervisor and Basketball Coach, University of Wisconsin. Graduated from College of Medicine, University of Maryland. Captain of baseball and basketball teams, Rochester, N. Y. Athletic Club; Basketball Coach, Wisconsin, 1911-17; Director of Physical Education, University of Missouri; Captain in Medical Corps U. S. Army.



Dr. W. E. Meanwell

RALPH N. McCORD

District Manager, National Life Insurance Company, Bloomington, Illinois. Graduated from University of Illinois, where he competed in track athletics; served seventeen months in France as Captain of Infantry. Since his discharge officiates in 75 to 100 basketball games and a number of football games each season.



Ralph N. McCord

FRANK G. McCORMICK

Director of Athletics, New Columbus College, Sioux Falls, South Dakota. Graduated from the University of South Dakota, where he played football, basketball and baseball. Commissioned First Lieutenant of Infantry and served with 88th Division in France. Coached at University of South Dakota and taught in the University of Illinois coaching school.



Frank G. McCormick



L. L. Mendenhall

L. L. MENDENHALL
 Director of Athletics, Iowa State Teachers' College, Cedar Falls, Iowa. Graduated from University of Iowa, where he was a member of the football, track and wrestling teams; also was a member of the Drake football and track teams and played halfback on the Great Lakes team, 1918, coached Boone, Iowa, and Carleton College.



T. Nelson Metcalf

T. NELSON METCALF
 Professor of Physical Education and Track Coach, University of Minnesota. Graduated from Oberlin College, where he was a member of the football, track and basketball teams; Football and Track Coach, Oberlin, 1912-14; Football Coach, Columbia, 1917-18; Director of Athletics, Oberlin, 1918-20.



E. D. Mitchell

E. D. MITCHELL
 Director of Intramural Athletics and Assistant Professor of Hygiene and Public Health, University of Michigan. Graduated from Michigan in 1912, and received master's degree from Michigan in 1919; Baseball Captain in 1912; coached Union High School, Grand Rapids, Michigan, and Michigan State Normal School Ypsilanti, Michigan.



Captain R. F. Nelligan

CAPTAIN R. F. NELLIGAN
 Associate Professor of Hygiene and Physical Education, Amherst College. Became a member of the Cornell University faculty in 1887 as instructor in gymnastics and athletics; went to Amherst in 1892 and has been employed there ever since with exception of two years spent in the service, from 1917-1919.



Harold G. Olsen

HAROLD G. OLSEN
 Basketball Coach, Ohio State University. Graduated from the University of Wisconsin, where he played on the football and basketball teams. Coached Ripon College for four years, where his basketball teams won the Little Five championship three times.



C. L. Parsons

C. L. PARSONS
 Sporting Editor of the Denver Post. Graduated from the University of Iowa, where he won nine letters in football, basketball and track. Coached at Trinity College, Sioux City, Iowa, and Colorado Mines. Commissioned First Lieutenant of Engineers and served overseas.



George H. Pritchard

GEORGE H. PRITCHARD
 Director of Athletics, Drury College, Springfield, Missouri. Graduated from Ohio Northern University, where he played quarterback and end. He has coached for fourteen years in a number of colleges with marked success.



Paul Rhoton

PAUL RHOTON
 Graduate Student Pennsylvania State College. Graduated from Georgetown College (Kentucky), where he played football, basketball and baseball for three years. High School Director of Athletics and Coach, 1915-20; Director of Physical Education, 1920.



A. J. Robertson

A. J. ROBERTSON

Director of Athletics, Bradley Institute. Graduated from the University of Montana; competed in all major sports at Carleton College and Montana; coached Kentucky Wesleyan, Georgetown College and Kansas State Normal, Fort Hays, Kansas.



K. K. Rockne

K. K. ROCKNE

Director of Athletics, Notre Dame, University. Graduated from the University of Notre Dame, where he was a member of the football and track teams for three years; was on all-American football team in 1913, and has a record of 12 feet 6 inches in the pole vault; has been head coach at Notre Dame for five years.



C. J. Rothgeb

C. J. ROTHGEB

End Coach, University of Illinois. Graduated from the University of Illinois, where he was on the football, baseball and track teams for three years; was on all-American football team two years; coached Colorado Agricultural College, Colorado College, and the line at Texas A. & M.



Paul J. Schissler

PAUL J. SCHISSLER

Director of Athletics, Lombard College. Graduated from University of Nebraska; was a three sport man at U. S. Naval Academy, Hastings College and Nebraska; coached St. Viator, Doane College, Hastings High School and the University of Nebraska.



K. A. Schlademan

K. A. SCHLADEMAN

Track Coach and Assistant Football Coach, University of Kansas. Graduated from De Pauw University, where he won his letter in football, baseball and track; has coached at Missouri Wesleyan College, Baker University and Kansas.



A. G. Schultz

A. G. SCHULTZ

Director of Athletics, Detroit University. Graduated from the University of Michigan; was chosen all-American center for the All-Time All-American football team when at Michigan; has coached at Wisconsin, Michigan, Kansas State Agricultural College and Tulane.



Andrew L. Smith

ANDREW L. SMITH

Head Football Coach, University of California. Graduated from University of Pennsylvania, where he was twice chosen for the all-American football team; coached the freshmen at Pennsylvania, 1905-06; Assistant Coach, 1907-08; Head Coach, 1909-12; Head Coach, Purdue, 1913-15; Head Coach, California, 1916-23.



W. H. Spaulding

W. H. SPAULDING

Head Football Coach, University of Minnesota. Graduated from Wabash College, where he competed in football and track; also competed in four sports at Lawrence University; Director of Athletics and Head Coach of Football, Basketball and Baseball, Western State Normal, Michigan.



H. J. Stegeman

H. J. STEGEMAN

Director of Athletics, University of Georgia. Graduated from the University of Chicago, where he won his letter in football, basketball and track. Coached at Beloit College, Monmouth College and University of Georgia; Army Y. M. C. A. Physical Director for eighteen months.

GEORGE T. STAFFORD

Assistant Professor of Orthopedics and Physical Diagnosis, University of Illinois. Graduated from Springfield College; did graduate work at Clark University; Physical Director Brookline High School; Physical Director in A. E. F.; Director of Exercise Department of Caines College of Physical Culture, Boston.



George T. Stafford



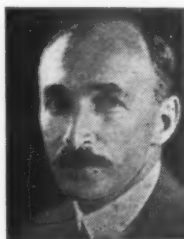
Seward Staley

SEWARD STALEY

Director of Required Physical Training, University of Illinois. Graduate of Springfield College; Master of Arts Clark University; served as Lieutenant of Infantry during the war, and after the armistice was attached to the Physical Department of the War Plans Division, Washington, D. C.

DOUGLAS STEWART

Head Coach of Soccer, University of Pennsylvania. Secretary of the National Collegiate Athletic Association Committee on Soccer Football. He has played with some of the best amateur soccer teams in England, Scotland, Canada and the United States.



Douglas Stewart



H. M. Webb

H. M. WEBB

Boxing Coach United States Naval Academy, Annapolis. Boxing Instructor of the American Expeditionary Forces in France. Coach of the United States Army team, which won the Inter-Allied boxing championship in the Pershing Stadium in 1919; coach U. S. Olympic team, 1920.

CHARLES L. WEBER

Graduate Student in Physical Education, Columbia University. Graduated from Colgate University, where he played on the football team for four years. Captain of Pelham Bay Naval Station team. Line coach at Colgate and Assistant Director University of Cincinnati.



Charles L. Weber



Dr. Garfield W. Weede

DR. GARFIELD W. WEEDE

Director of Physical Education, Pittsburg, Normal, Kansas. Graduated from the University of Pennsylvania, where he played football for three years; has coached for eighteen years at Sterling College, Washburn, Camp Funston and Pittsburg Normal, Kansas.

MAJOR J. L. WIER

Commandant St. John's School, Salina, Kansas. Graduated from the United States Military Academy, West Point, N. Y., where he played guard on the football team for three years; served as Major of Infantry in France.



Major J. L. Wier



K. L. Wilson

K. L. WILSON
 Director of Physical Education, Drake University. Graduated from the University of Illinois, where he was a member of the basketball and track teams for three years; was a member of the American team in Olympic games at Antwerp.



A. B. Wimberly

A. B. WIMBERLY
 Director of Physical Education, Illinois Wesleyan University. Graduated from Washington and Jefferson University, where he played center, tackle and guard for three years; coached for two years at Westminster College and at Illinois Wesleyan for two years.



Frank J. Winters

FRANK J. WINTERS
 Director of Physical Education, Oak Park High School, Oak Park, Illinois. Graduate of Springfield College, has coached in Rockford, Illinois, High School, the University of Illinois, and Oak Park. In 1923 his track team won the Illinois Interscholastic Track Meet.



Fielding H. Yost

FIELDING H. YOST
 Director of Athletics, University of Michigan. Attended Lafayette, where he played football. Has coached Ohio, Wesleyan, Nebraska, Kansas, Stanford and Michigan. He has coached the Michigan football teams since 1901.



Edwin H. Wood



C. A. West

EDWIN H. WOOD
 Swimming Coach, Oregon State Agricultural College, Corvallis, Oregon. Served three years in the navy, being discharged in 1911. Served again during the war. Has coached swimming at Western State Normal, Michigan, Mercersburg Academy, Gulf Coast Military Academy and Lewis and Clark High School.

C. A. WEST
 Director of Athletics, State College, Brookings, S. Dak. Graduated from Coe College, where he competed in football, basketball and track. Member of Chicago Athletic Club Track Team. Coached Mason City High School, Mason City, Iowa.



G. S. Lowman



C. P. Parker

C. P. PARKER

Instructor in Athletics and Assistant in Gymnasium, Phillips Exeter Academy. Graduated from Dubuque University, where he competed in four major sports. Played professional baseball with St. Louis and Chicago Americans.

G. S. LOWMAN

Director of Gymnasium and of Professional Courses, Baseball Coach and Assistant Football Coach, University of Wisconsin. Graduated from Iowa State Normal and Springfield College. Played football, baseball and basketball. Coached Warrensburg Normal, Missouri, Alabama, Kansas Agricultural College, and Indiana.

LIEUT. ELMER Q. OLIPHANT

Director of Physical Training and Athletics, Union College. Graduated from Purdue and the United States Military Academy. Won letters in four major sports in each institution. Was chosen on All-American football, basketball and baseball teams.

L. V. BORLESKE

Director of Athletics, Whitman College, Walla Walla, Washington. Graduated from Whitman, where he played football, baseball and basketball. Served as Lieutenant of Infantry in World War. Played on Camp Pike football team.

F. J. O'NEIL

Attorney, New York City. Graduated from an Eastern University and has coached for a number of years. Among the University football teams, which he has coached are Syracuse and Columbia.

E. A. COREY

Hilo, Hawaii. Mr. Corey organized the Nomad Hiking Club in Oakland, California. Later he was Director of Amateur Athletics stationed in Hilo, Hawaii.

J. M. MAC KENDRICK

Formerly Assistant Y. M. C. A. Director, University of Illinois. Played soccer both in England and Canada. Served with the Canadian troops in the World War. Coached the Illinois soccer team 1919.

GEORGE ORTON

Director of Pennsylvania Relays. Graduated from University of Toronto, where he was a member of the track and soccer teams. He was a champion distance runner and has coached track and soccer at different times at the University of Pennsylvania.

GENERAL PALMER PIERCE

President of the National Collegiate Athletic Association. General Pierce graduated from the United States Military Academy. Served in France in World War. Helped organize the National Collegiate Athletic Association and has served as President from the beginning.

M. J. DONAHUE

Director of Athletics and Football Coach, Alabama Polytechnic Institute. Mr. Donahue has just signed a five-year contract with the University of Louisiana, Baton Rouge, Louisiana. He was Director and Coach at Auburn for a number of years.

DR. P. E. BELTING

Professor College of Education, University of Illinois. Graduated from University of Illinois, where he played football. Has coached in several high schools, at the University of Illinois, and assisted in games at the Horace Mann School.

HARRY HILLMAN

Track Coach, Dartmouth College. Mr. Hillman is President of the Track Coaches' Association of America. He has had a successful coaching career, but is best known for his work at Dartmouth.

ART SMITH

Track Coach, Iowa State College, Ames, Iowa. Has coached Buffalo High School, Williston Academy, University of Maine, Colby College, Tufts and the Michigan Agricultural College.

AN ANALYSIS OF PADDOCK'S SPRINTING ABILITY

(Continued from page 11)

This is the main cause of tying up as we term it in athletics, and accounts also for what is known as rolling of one's body when nearing the finish line. This is why athletic coaches pay such close attention to form, so that one may get the maximum of work out of the muscles to correspond with the nerve force put into them.

Paddock and Kirksey have opposed one another on about fifteen different occasions, and the former has beaten Kirksey on each occasion by a margin of inches, sometimes so close have been these two speed marvels at the tape that the Judges have had difficulty in deciding the winner.

In the two-twenty Paddock has not even a close rival, for here again he demonstrates a wonderful coordination of muscles, each set of which seems to respond at will. Especially is this true when a final effort is demanded. The relaxation of Paddock's features, as already stated, at the end of a race denotes fully the unusual control of the body when under way.

Most short runners carry their arms during a race obliquely across the body. On the other hand, a tall runner carries his arms more with a backward and forward motion. A short runner usually has more control over his muscles, and it is very noticeable that he works from the hips, which tends to lengthen his stride without interfering with his balance. Paddock's unusually long muscles from the hips down allow him freedom of action both from the hips and the legs proper, combining the action both of the tall and short runner. Paddock's arm action is a natural movement for a man of his build, and adds much to his powerful leg drive. Paddock's present form, then, is one under which he can achieve the best results. To sum up, one would say that the secret

GOLD MEDAL WINNERS**Western Conference Meet**

(Obverse)



(Reverse)

AN established medal justifying its selection by the officers and the enthusiasm of its recipients:

The following winners of first places in the Intercollegiate Conference Meet at Ann Arbor June 2nd are wearers of the gold medal above:

- L. G. Wittman, Michigan, 100 yard dash.
- M. E. Hall, Illinois, 1 mile run.
- P. C. Sweet, Illinois, 440 yard dash.
- E. C. Wilson, Iowa, 220 yard dash.
- C. R. Brookins, Iowa, 220 yard hurdles.
- L. Valley, Wisconsin, one-half mile run.
- E. R. Isbell, Michigan, 2 mile run.
- D. G. Brownell, Illinois, pole vault.
- D. Hubbard, Michigan, running broad jump.
- J. K. Brooker, Michigan, discus throw.
- R. W. Smith, Michigan, running high jump.
- W. J. Van Orden, Michigan, shot put.
- M. S. Angier, Illinois, javelin throw.
- H. M. Hindes, Michigan, hammer throw.
- J. C. Smuts, D. E. Carter, P. C. Sweet, H. M. Fitch, Illinois, relay team.

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of Paddock's success lies chiefly in his long, even, and powerful stride, perfect co-ordination of muscle action with powerful arm motion which assists materially in bringing his legs forward, correct method of breathing when in action, coupled with a reserve force for final effort.

The question is often asked here at Stanford by the many admirers of our own champion Morris Kirksey: will he eventually beat Paddock in the hundred? The writer for one feels that such an opportunity is ahead of Kirksey during the Olympic Games to be held in Paris in 1924. Such, however, will require special preparation on the part of Kirksey, who, by his performance in New Zealand during the early Spring this year when he ran the 100 yards in 9 4-5 seconds, denotes that he is not slowing up any. In this same meet, held under the auspices of the New Zealand Amateur Athletic Association, Kirksey ran the 220 in 21 3-5 seconds against a stiff cross

breeze (as quoted from the New Zealand papers). Both races were timed by no less than eight experienced timers. I say "experienced" for certain sportsmen in that country make a business of timing, and when they give a man credit for ten flat, one may rest assured that the runner earned it.

Paddock, to the writer's knowledge, has never pulled a muscle. Kirksey, on the other hand, has. Anyone with short, thick muscles is more susceptible to muscle strain than, say, a man of Paddock's build.

Light exercises, with plenty of massage such as kneading and stretching of the leg muscles, plenty of practice starts and a trial run once a week, starting from the hundred mark and running through at top speed beyond the finishing post, putting the final effort into the last twenty-five yards, for it is here that Kirksey seems to have trouble, will give him a sufficient reserve force to carry him through under control.



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Steel Rods brace horses at top and middle.

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THE CRAWL STROKE

(Continued from page 13)

times and add breathing at the count of 2 or as the left arm is lifted.

In practicing the leg movement

fore the arm has reached its full length.

Push off from side or from a dive face downward with arms and legs extended and get about four to six leg beats.



Illustration 4. The air is expelled when the nose is below the surface of the water.

sit on a chair and execute an up and down threshing movement with legs extended and toes pointed and turned slightly upward.

IN THE WATER.

The body is kept as close to the

Leg Movement.

Legs should be extended, toes pointed and turned slightly inward, legs about a foot apart from knees down (do not hold legs rigid). The legs are then worked alter-

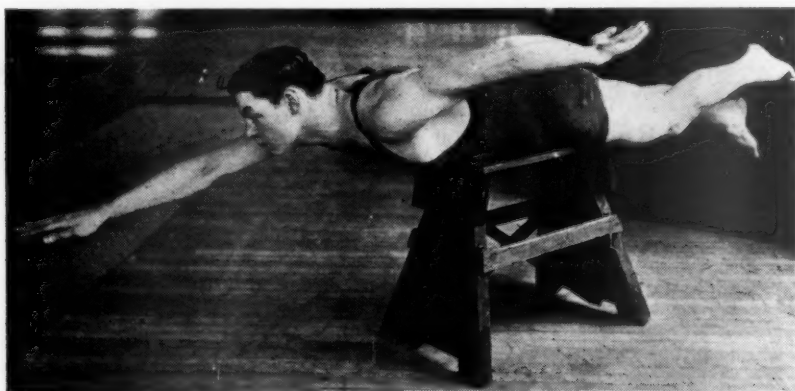


Illustration 5. Johnnie Weismueller showing the finish of a cycle of movements in the crawl.

surface as possible with the head in position to allow the water to strike just above the eyes. The average swimmer should take a long arm stroke. In the over arm movement it is well to slide the hand in the water just a little be-

nately up and down with the knees bent slightly.

Arm Movement.

To illustrate, assume that breathing is on the left side. The left arm is brought down through the water on the inside line of the body

to the thigh with the elbow bent (illustrations 1 and 2). A slight body roll is then made to the left to enable the swimmer to lift his right arm from the water. The arm is lifted with the elbow leading or arm bent at elbow with hand cupped and then thrust forward in the water (See Illustration 2). Simultaneously as the right arm is lifted the left arm is brought down through the water in the same manner as the right. As the left arm is being lifted from the water the head is turned slightly sideward to the left with the mouth open and air is inhaled. (See Illustration 3). At this time the right arm is brought through the water. As the left is thrust forward into the water the head is turned forward and the air is expelled partly through the mouth and nose under the water (See Illustration 4). The left arm is again brought down through the water, finishing as in Illustration 5. These movements are executed continuously, making a complete cycle.

Combining the Arms and Legs.

In combining the arm and leg movements keep the legs moving continuously up and down with a thrashing movement attempting to get four to six beats with complete arm circles. With practice you will finally get the co-ordination.

Other Leg Movements. Trudgeon, Crawl.

Spread legs with the toes pointed sideward; use half scissors about a foot and half; snap them towards each other until within a foot apart, then get three up and down movements, making four beats.

Double Trudgeon Crawl.

Use the scissor kick on each side and make decided up and down movements, making six beats to the arms. Practice arm movements in the water.

Athletic Activities

revive with the advent of warm weather and bring to the attention of the athletic director great increase in the number of cases of sprains, strains, bruises, wounds and other minor injuries.

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BUNTING

BY

CAPT. JOHN R. BENDER.

This article on bunting is a continuation of the article on batting by Capt. Bender, which appeared in the May Journal.—EDITOR'S NOTE.



IN recent years in league baseball there has been a tendency to neglect the bunt, as it is claimed that the hit and run play will work more often to the advantage of the team at bat than the bunt. It is doubtful whether this can be proved by actual statistics. For my part I am convinced that the bunt will always remain a valuable asset to the team at bat, as the bunting attack is disconcerting to the team on the defense and often disorganizes the team in the field. Further, since many brilliant pitchers cannot field bunts, a team with men who can "lay them down" will often unsettle a good pitcher. This also applies to the entire infield, as a bunting game calls for additional alertness, nervous force and energy on the part of the men of the first line of defense and this is a psychological factor well worth considering, especially in college baseball.

In the article on batting it was suggested that the batter must have courage, a good stance, a good eye, co-ordination and a level bat push, which is correlative with the follow through. These same qualities are likewise necessary in bunting. First as regards courage, this not only means that the batter must be willing to stand his ground without fear of being hit, but further, he must have the right mental attitude toward the bunt and this means that he must have confidence that he can bunt when he wants to. If a player thinks that he cannot bunt, quite naturally

he will not be able to do so with any degree of success. Second, as regards the position at the bat, the player must be taught to take an easy stance with his feet flat on the ground and well anchored. If the ball comes over the place high he must raise his shoulders and get his arms well away from his body. In this connection a man should never bunt a bad ball but should make the pitcher place the ball where he, the batter, wants it and where he can bunt it most successfully. It is hard to bunt a high ball or a low pitched ball. The waist ball is the easiest one to bunt. In fact an experienced bunter should be able to push a ball that comes to him waist high to any place in the diamond with a great degree of certainty and accuracy. If the pitcher knows that the batter is planning to bunt, he will probably try to make the latter bunt a high ball or a bad ball. If the batter can "play the string" under these circumstances he has a good chance to get a base on balls.

To make a perfect bunt the bat must meet the ball, for if the ball meets the bat this means that the batter loses the advantage and it will be difficult to direct and control the ball. The bat should always be level with the ground in bunting. If the ball is pitched low then the batter must bend his knees and lower the body so as to permit the batter to push out a level bunt. There are some who believe that to bunt one should let the ball meet the bat just as the bat is slightly withdrawn. This is hard to accomplish and fewer good bunts are made this way than by the method previously discussed of meeting the ball with the bat. The push bunt

is easily learned and then besides there is some advantage in having the man at the bat in an aggressive attitude of mind rather than in a defensive state of mind. Further, when a batter completes a push bunt his movements are toward first base, while when he uses the other method he is moving the other way. The bunter, however, may overdo this and start to run before he bunts. He should remember that he should bunt first and run afterward.

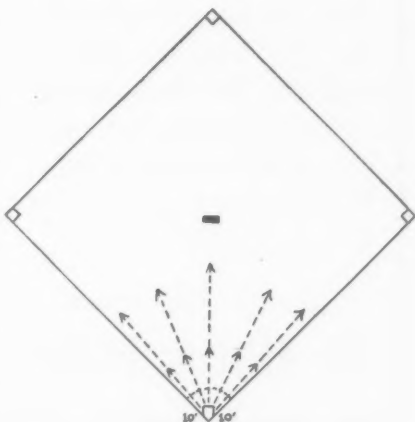
The bat should be held a few inches from the end in a loose grip.

A right handed batter slides his right hand along to about the middle of the bat and raises his left hand slightly in order to create a perfect balance. The thumb and the two first fingers of the right hand partly encircle the large part of the bat.

Bunting Zones

In order to visualize to the play-

ers the real value and the great possibilities of bunting it is well to diagram the various bunting zones. Bunt directly toward the pitcher, between the pitcher and the first baseman, between the pitcher and third baseman, along the first base line, and along the third base line, as follows:



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220-YARD DASH—20 9-10 sec.

Charles W. Paddock, University of Southern California, 1921.

440-YARD RUN—(1 turn) 47 4-10 sec.

J. E. Meredith, Pennsylvania, 1916.

Binga Dismond, Chicago, 1916.

880-YARD RUN—1 min., 52 2-10 sec.

J. E. Meredith, Pennsylvania, 1916.

ONE MILE RUN

N. S. Taber, Brown University, 1915, 4 min. 12 6-10 sec.

J. P. Jones, Cornell University, 1913, 4 min. 14 4-10 sec.

120-YARD HIGH HURDLES—14 4-10 sec.

E. J. Thomson, Dartmouth, 1920.

TWO MILE RUN—9 min. 17 8-10 sec.

R. S. Berna, Cornell, 1912.

220-YARD LOW HURDLES—23 2-10 sec.

C. R. Brookins, Iowa, 1923.

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Ralph Rose, Michigan, 1909.

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F. D. Tootal, Bowdoin, 1923.

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Milton Angier, Illinois, 1923.

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ATHLETIC PARTICIPATION AND SCHOLARSHIP

BY

PAUL RHOTON

The author of this article is at present doing graduate work in the Department of Education and Psychology of Pennsylvania State College. The material for the article is taken from the results of a research problem which will, when completed, be presented for a master's thesis. Mr. Rhoton was graduated from Georgetown College, Kentucky, in 1914. He played varsity football, basketball and baseball at Georgetown for three years. He was engaged in High School coaching for five years and then went to Georgetown as Director of Physical Education where he served for two years.—EDITOR'S NOTE.

I. INTRODUCTION



THE question of the scholarship of the Varsity athlete as compared with the average for the school and the non-athlete group is one that has called forth

many conflicting opinions. The enthusiastic advocate of inter-collegiate sports is prone to claim a high correlation between athletic prowess and scholastic achievement. Extremists of the opposite viewpoint are inclined to picture the average college athlete as an individual, large of muscle and thick of head, whose I. Q. would entitle him to rank as a high grade moron. Both views are exaggerated and untenable.

If any marked difference exists between the scholastic achievements of the athletic and non-athletic groups, it should show up in such an institution as Pennsylvania State College. Only a small percentage of the student body make the varsity teams; and all branches of sport are conducted on a basis of intensive training that takes quite a bit of the athletes' time and attention. Competition for places on the various teams is severe and the amount of physical and nervous energy expended on the playing field or floor is a factor that varies with the sport and the individual.

On the other hand, athletes at

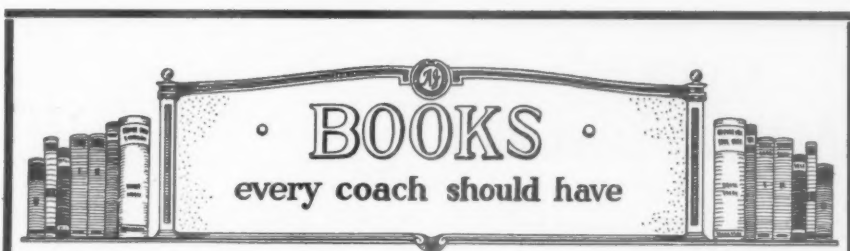
Penn State are required to conform to a certain standard of scholastic excellence before they can represent the school as members of its teams. Any athlete falling below this standard is at once dropped from the team. Only bona fide students who have completed one year's residence as a student in a four-year college course are eligible to represent the institution and only three years of competition is allowed. The migratory rule is strictly enforced.

To ascertain what work has been done along this line in other schools, a letter was sent to the heads of the departments of physical education of the following Universities: Harvard, Yale, University of Illinois, California, Ohio State, Michigan, Princeton, Chicago, Wisconsin, Minnesota, Pittsburgh, Pennsylvania, Columbia, and International Y. M. C. A. College, Springfield, Mass. In this letter request was made for any available data covering technique, scope, and results of their studies of the problem. These schools were chosen because of their well-organized departments of physical education and adequate equipment for studying various phases of physical education work.

A gist of the replies received follows:

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in Certain Athletic Sports," (year 1919-1920) shows that among the three upper classes the athletes have nine excused and thirty-two unexcused absences as compared with seven excused and thirty unexcused absences for the non-participants. The athletes made A or B in 29.7% of their courses, C in 50.4% and D or E in 19.9%. The non-athletes ranked considerably better in high grades made, making A or B in 38.7% of their courses, C in 45.2%, and D or E in 16.1%. Varsity football, baseball, hockey, track, and crew men were classed as athletes.

U. OF ILLINOIS:

Dean of Men Thomas A. Clark, states: "My investigation of the work of athletes has proven to me that the athlete ordinarily has better scholastic standing than the average man in college. I have not recently published any statistics on this matter."

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U. OF MICHIGAN:

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Average of athletes.....	74½
Average Varsity athletes.....	76

In his letter, Mr. E. E. Wieman, Assistant to the Director, did not make clear the distinction between "Athletes" and Varsity Athletes," but the latter group was evidently composed of the men on the varsity teams.

PRINCETON:

Now working on a comprehensive study of all extra-curricular activities, including athletics. Results are not yet available.

PITTSBURGH:

"Have not compiled any statistics showing effect of athletic participation on scholarship or a comparative study of the scholarship of athletes and non-athletes. * * We have in the past kept record of the scholarship grades of athletes and found them to be generally high. The athletes' records were better than those of the non-athletic activities."

WISCONSIN:

"The University of Wisconsin does not have at hand statistics showing the effect of athletic participation on scholarship, but in my judgment the athletic group is far above the average in scholarship."

No study of the problem as stated had been made by Yale, Columbia, Minnesota, Chicago, Ohio State, California, and Springfield Y. M. C. A. College. University of Pennsylvania did not reply.

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Most of the individuals replying expressed a desire to help and asked for findings at Penn State.

The question, "Is the scholarship of your varsity athletes above, equal to, or below the general average for your school?" was incorporated in a questionnaire sent to the colleges and universities of the Southern Association of Colleges. Five colleges reported varsity athletes as above average, seven reported them as below average, and nineteen reported them as equal to the average. No statement was made as to the methods used in arriving at their conclusions.

This preliminary correspondence brought out three facts.

1. With the possible exception of Harvard, no comprehensive study of the problem has been made by any of the schools questioned.

2. Data found and personal opinions conflicted to a rather marked degree.

3. A general interest in the question exists.

II. PROBLEM

This study was undertaken for the purpose of formulating if possible an answer to the question, "In what ways and to what extent does participation in inter-collegiate athletics affect the scholarship of the athlete." Many interesting facts came out concerning the averages of the entire group, non-athletes, athletes, and the effects of the different branches of sport upon the scholarship of the men participating in them.

III. METHOD

Material was obtained from the records of the 931 men in the classes of 1921-1922. The list of varsity athletes was obtained from the records of the Athletic Association for the years 1918, 1919, 1920, 1921 and 1922 and "The Directory of Penn State Letter Men" 1922 edition.

Only first string varsity players were placed in the "athlete" group.

All other were classed as "non-athletes."

All semester grades were weighted in proportion to the number of credit hours allowed for the course. The semester average was found by dividing the sum of the semester grades (multiplied by the number of credit hours) by the total number of credit hours.

All averages were determined to two decimal places and recorded correct to the nearest tenth of a percent.

A record was made for each individual showing name, department, teams played on, if any, and semesters playing, and his average grade for each semester of the sophomore, junior and senior years.

Since freshmen are not eligible to play on varsity teams at Penn State the first year's grades were not considered.

Basketball, wrestling, and boxing were considered second semester sports, most of the playing season coming during the second semester. In case a man played one of these branches and also baseball, track, or lacrosse in the same semester his grade for the semester was counted under each sport.

An adding machine was used to obtain all totals. Averages for the different groups were made by semesters and these were combined to obtain year and three year averages.

All averages given will be for the entire three years. Semester fluctuations were slight and they are not necessary for the purposes of this paper.

The system of grading used at Penn State is:

- A.....90 or above
- B.....75-80
- C.....60-74
- D.....Failure, conditional
- E.....Failure, unconditional

IV. DATA

Ninety-seven (97) men or 10.4 percent of the entire group considered were classed as varsity ath-



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letes. Eight hundred thirty-four (834) fell in the non-athlete group. In all, 5477 semesters averages were computed and used.

Eight athletes were three-letter men and twenty-two were two-letter men. These men were listed under each sport in which they participated. The numbers electing each of the intercollegiate sports were:

Football	34
Track	20
Wrestling	16
Baseball	13
Basketball	10
Soccer	10
Lacrosse	15
Boxing	7
Tennis	5
Cross Country	5

The three-year average of the entire group was 76.4%. The athletes averaged 75.1% and the non-athletes 76.6%.

The averages for the groups electing the different branches of sport are:

	(a) all Semesters	(b) semesters participating	(c) semesters not participating
Football	73.5	72.4	74.4
Baseball	74.8	74.6	74.9
Track	74.5	73.7	75
Basketball	75	73.9	76.5
Soccer	76.8	77.0	76.7
Wrestling	77.4	78.3	76.9
Lacrosse	76.4	79.4	74.9
Boxing	76.6	76.9	76.6
Tennis	74.6	74.6	74.6
Cross Country	76.5	74.9	78.6

Total Average all branches.....75. 75.5

Note: Columns (b) and (c) will not necessarily check with column (a) as all averages are weighed according to the number of semesters the athletes did or did not participate. For example, the thirty-four football men played during seventy-seven semesters and did not play eighty-one semesters.

This table brings out several interesting facts:

1. Football ranks lowest of all the sports and active participation has a decided tendency to lower the grades of the players, below the average made during the semesters they are not playing.

2. Basketball, baseball, track and tennis hover around the average for the entire athletic group. Active participation lowers the grade of the track and basketball men approximately one point and two and one-half points respectively.

3. Soccer, Lacrosse, Boxing, Wrestling, and Cross Country average as high or higher than does the non-athletic group. Active participation tends to lower the grades of the cross country men but soccer lacrosse, boxing and wrestling men do as well or better during the semesters they are actually engaged in competition.

4. On the whole, athletes aver-

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age .5% better when not participating than they do when participating. This difference is practically negligible.

5. Eliminating the football men the athletes average 76.5 when competing and 75.9 when not competing, making an average of slightly more than 76 for all branches of sport excepting football.

6. Grouping the different branches into "major" and "minor" sports we find that the latter group ranks considerably higher. The major sport athletes (football, baseball, and track) average 73.1 while competing and 74.7 while not competing. The minor sports athletes (basketball, soccer, wrestling, boxing, lacrosse, tennis, and cross country, average 76.9 when competing and 76.2 when not competing.

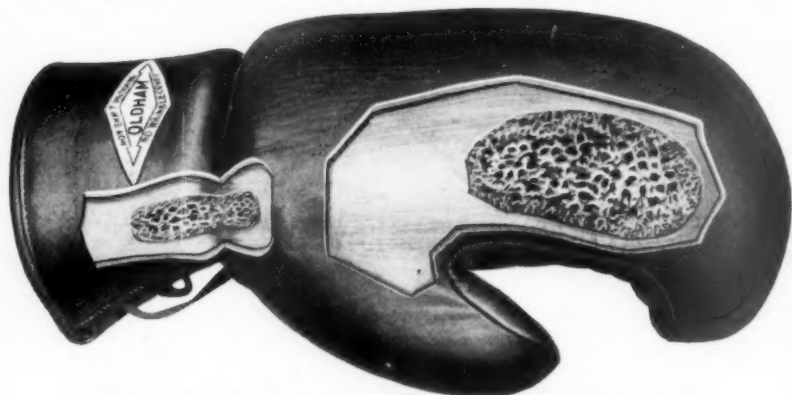
V. DISCUSSION AND CONCLUSIONS

1. Intercollegiate football as practiced and played in a large school is detrimental to scholarship.

The practice hours are long, the schedules played are hard and judging from the opinions of the players themselves, unfits the football player for doing his best in his studies. At Penn State and schools of her type and athletic prestige, inter-collegiate football can hardly be termed play. In fact, it is taken very seriously by both players and student body. Estimates of players place the time per day consumed in practice (including bathing and dressing) at not less than four hours. The 1922 team was absent from school 13 days on account of games away from home. There is, of course, no way of estimating the time in thought and worry devoted to the game outside of practice hours. After the fall season, all football men are encouraged to take up some winter sport and in the spring those who are not out for some other sport must report for spring football practice. It is indeed small won-

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der that the average grade made by varsity foot-ball men is 3.1% lower than that made by the non-athlete.

2. Baseball, track and basketball men suffer to a lesser degree than do the football men. These branches though popular, do not require as much time or energy or mental wear and tear. They average just about 2% lower than does the non-athlete group.

3. Soccer, wrestling, boxing, and lacrosse men equal or better the average of the non-athletes and all average higher for the semesters during which they are participating than they do during the semesters they are not playing.

4. The tennis and cross country groups were too small to warrant any definite conclusions as to the effect of these sports on scholarship. It is interesting to note, however, that the tennis group did not vary in the least in their averages for semesters playing and semesters not playing. On the other hand the cross country group drop almost

four points during their semesters of active participation.

5. In general, this study has brought out the fact that inter-collegiate athletics do not have very far-reaching effects upon the scholarship of the athletes. It has shown rather conclusively that the effects of intensive training in intercollegiate sports and the necessary absences from school are often grossly overestimated. The situation is surely not a very serious one when the football men in a typical "football school" with a nationally famous coach and all modern conveniences maintain an average throughout their last three years in college only 1.5% less than the institution's minimum requirement for a "B" grade. Those of us who see in football a developer of character, team work and school spirit believe that the benefits derived from the game much more than compensate the player for his slight loss in scholastic standing.

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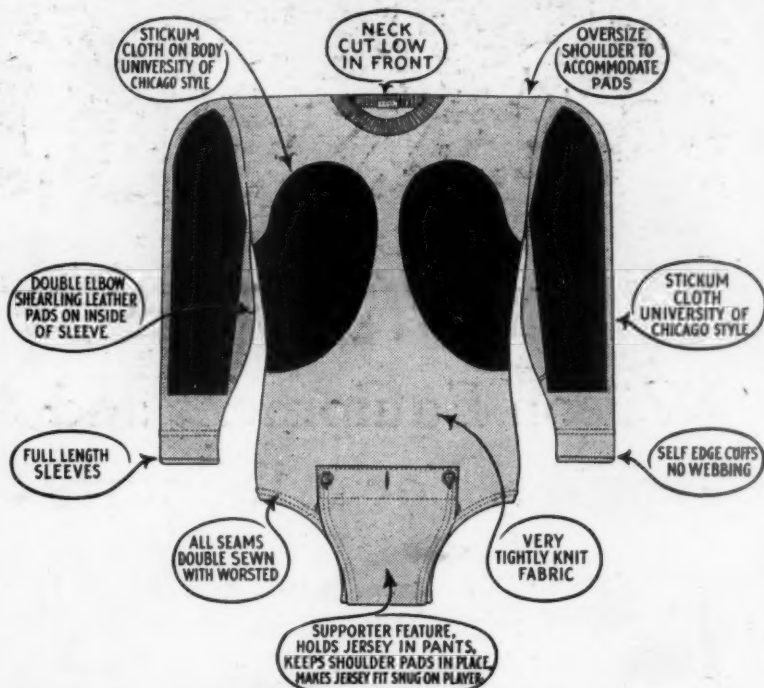


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